CHAPTER 2

INDIVIDUAL MANAGEMENT PLANS FOR HUNTING DISTRICTS AND UNHUNTED POPULATIONS

There are 45 distinct bighorn sheep populations managed by Montana Fish, Wildlife & Parks (FWP) in 40 hunting districts, 36 of which were open for hunting in 2008 (Table 7 and Figure 12). There are an additional two populations that occur in Glacier National Park, a couple of populations that move in and out of Montana and Yellowstone National Park, and at least two populations that are managed by different Indian tribes in Montana.

Figure 12. Bighorn sheep hunting districts, Montana, 2008.

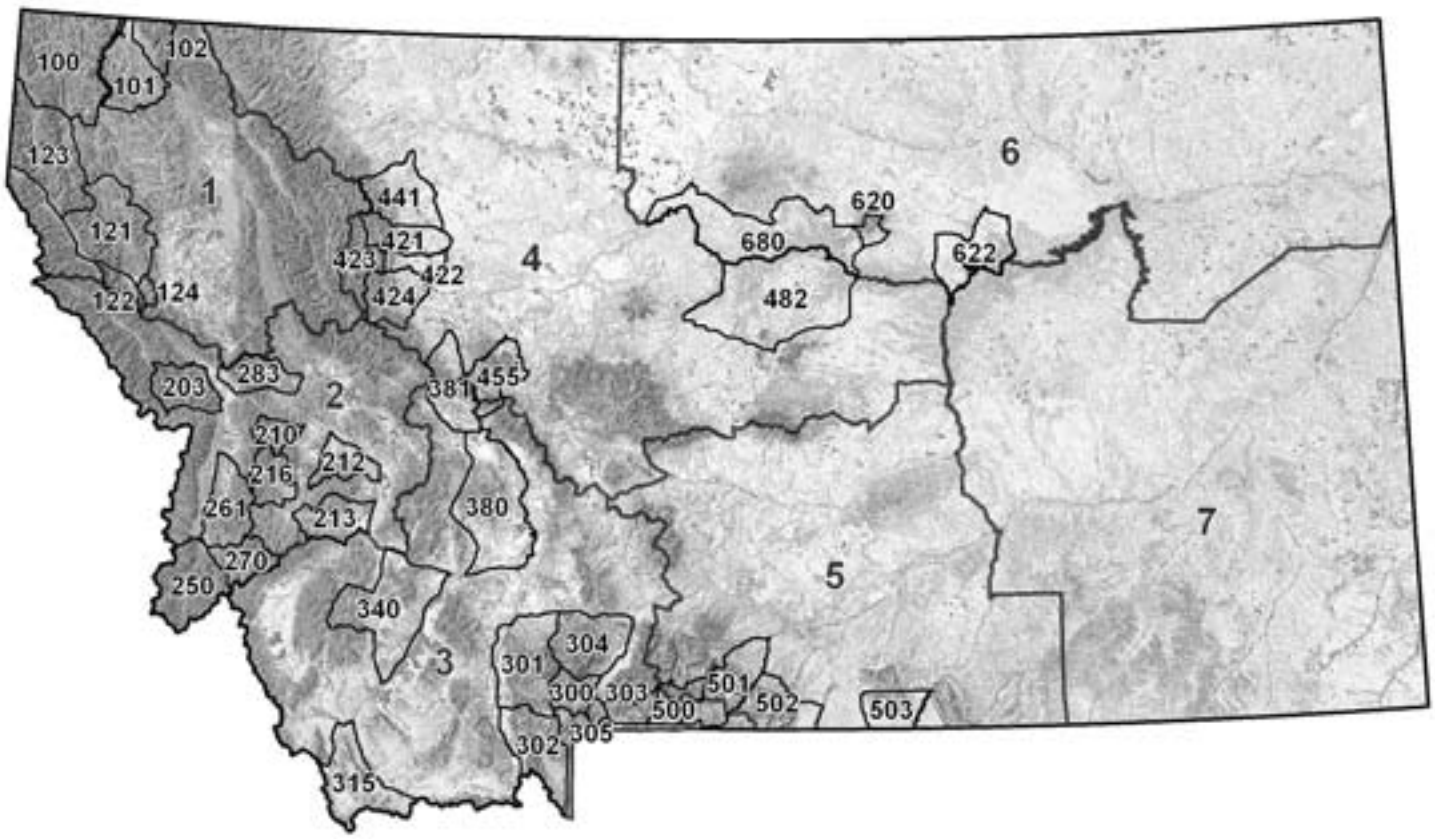

Table 7. Total number of bighorn sheep observed , population objective by hunting district and year(s) of any major die-off.

Hunting District	Herd Unit Name	Current Total	Population Objective		Recent Die-Off Year(s)
			+10% Total	+20% Total	
100	Kootenai Falls	79	175		1995
101	Ural-Tweed	30	150		1999
102	Galton Range	61	150		
121	North Clark Fork	270	250		
122	Clark Fork Cut-Off	141	115		
123	Cabinet Mountains	78	105		
124	Paradise	324	325		
	Wildhorse Island	139	110		
R1 Totals		1122			
203	Grave Creek Range	151	130		
210	John Long Range	201		200	
212	Garrison	65		125	
213	Lost Creek	314		250	1991
216	West Rock Creek-Quigg Peak	342		300	1967
250	Watchtower	18		20	
	Paint. Rocks	120		120	
261	Skalkaho	90		120	
270	E. Bitteroot	170		200	
283	Lower Blackfoot	128	100		
R2 Totals		1599			
300	Gallatin-Yellowstone	35	215 [1/]		1982
301	Spanish Peaks	158		150	1999
302	Hilgard	105		100	1987-97
303	South Absaroka	20			
304	Hyalite	25			
305	South Yellowstone	35			
315	Tendoy Mountains	59	200		1993-99
340	Highland Mountains	12		125	1995-08
380	Radersburg	40		125	2008
381	Sleeping Giant	7		125	2001-07
	Mill Creek	25		25	
	Greenhorns	31		125	
R3 Totals		552			
421	Deep Creek	60	175		1984
422	Castle Reef	215	200		
423	Gibson Lake North	204	200		1984
424	Ford Creek	298	200		1984
441	North Fork Birch Creek-Teton	138	200		1984
482	Fergus	348	325		
455	Beartooth WMA-GMWA	97	250		1984
R4 Totals		1360			

Table 7 continued.

Hunting District	Herd Unit Name	Current Total	Population Objective		Recent Die-Off Year(s)
			+10% Total	+20% Total	
500	Stillwater River	46	55		
	Monument Peak	26	40		
501	Beartooth Mountains	78	70		
502	Hellroaring	41	50		
503	Pryor Mountains	78	85		1995
R5 Totals		269			
620	Little Rockies	80	85		1998
622	Middle Missouri Breaks	202	185		
680	Chouteau-Blaine-Phillips	450	425		
R6 Totals		732			
R7 Totals	Blue Hills	60	60		
Statewide Totals		5694	4505	2110	
Total Statewide Objective			6615		

1/ This objective is for Hunting Districts 300, 303, 304, 305 and Yellowstone Park bighorns along the Northern border of the Park (entire Upper Yellowstone Complex).

Since 1984, 15 populations (33%) have gone through a die-off (Table 7). One additional population that was located in the lower Boulder River (former Hunting District 504) south of Big Timber went through a die-off in 1999 and 2000 and by the following year out of an estimated 100 bighorn sheep none remained. While Montana has a reputation of producing large rams not all populations are meeting desired objectives. Twenty-seven (60%) of the 45 populations have less than 125 sheep, which is a minimum viable population (MVP) (Table 8). Eighteen (40%) of bighorn populations are below objective and 12 populations have an objective less than 125 sheep. Having less than 125 sheep in a population or an objective of less than 125 sheep may not be critical in sustaining a population if the individual population is part of a larger viable metapopulation where genetic exchange occurs maintaining genetic diversity and overall fitness of the population. However, isolated populations with less than a MVP may be difficult to maintain over time. In these small populations factors that may be limiting population growth (habitat, genetic fitness, or other factors) need to be determined.

Nine of the populations that have gone through a die-off have not recovered to their pre die-off status, some after several augmentations. These die-offs tended to be all age epizootic events in introduced populations. Survivors retain pathogenic agents that are toxic to lambs and poor lamb recruitment is the primary reason for lack of recovery in these populations. The status of these nine populations, considering the current knowledge of disease in bighorn sheep, is not likely to improve in the near future and points out the necessity for preventing these types of die-offs from occurring.

FWP Region	Number Populations	Number < 125	% < 125	Number < Objective	% < Objective	Objective < 125	% with Objective < 125
1	8	4	50	4	50	3	38
2	9	3	33	2	22	1	11
3	12	11	92	5	42	1	18
4	7	2	29	3	43	0	0
5	5	5	100	4	80	5	100
6	3	1	33	0	0	1	33
7	1	1	100	0	0	1	100
Total	45	27	60	18	40	12	27

Table 8. Status of bighorn populations in relation to objective by FWP Region.